(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 13 January 2005 (13.01.2005)

PCT

(10) International Publication Number WO 2005/004560 A1

(51) International Patent Classification7: H05K 1/03

(21) International Application Number:

PCT/IB2004/051039

(22) International Filing Date: 29 June 2004 (29.06.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 03101991.2

3 July 2003 (03.07.2003)

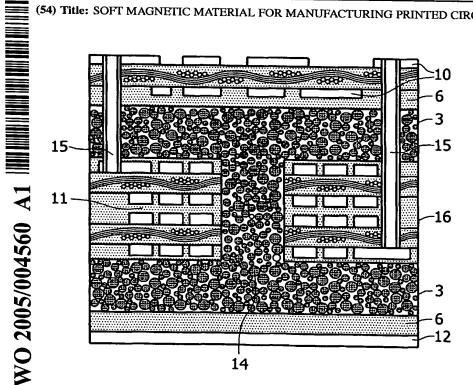
- (71) Applicant (for DE only): PHILIPS INTELLECTUAL PROPERTY & STANDARDS GMBH [DE/DE]; Steindamm 94, 20099 Hamburg (DE).
- (71) Applicant (for all designated States except DE, US): KONINKLIJKE PHILIPS ELECTRONICS N. V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (71) Applicant (for all designated States except US): ISOLA GMBH [DE/DE]; Isolastrasse 2, 52353 Düren (DE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): WAFFEN. SCHMIDT, Eberhard [DE/DE]; c/o Philips Intellectual

Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE). LANGKABEL, Eike [DE/DE]; c/o Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).

- (74) Agent: MEYER, Michael; Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: SOFT MAGNETIC MATERIAL FOR MANUFACTURING PRINTED CIRCUIT BOARDS



(57) Abstract: The present invention relates to a soft magnetic material for use in the manufacturing of printed circuit boards. During the manufacturing of the printed magnetic circuit boards, the soft magnetic layer is used, such that it forms an integral part of the PCB after the manufacturing. In particular, the soft magnetic layers are formed such that, together with suitable circuit structures, an inductive component is formed. According to an aspect of the present invention, a polymer matrix of the soft magnetic layer is compatible to materials and/or processes used during the PCB manufacturing process.

WO 2005/004560 A1



Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.